

### Abstract of the Disclosure

A radiation system includes a measuring section of position and direction for computing relative position and direction between various components of the system; an irradiation condition correcting section for obtaining positions and directions of the irradiation target regions in the images using computation results obtained by the measuring section of position and direction and compared results obtained by comparing the irradiation target regions in the images taken by an irradiation target image acquisition section, and for correcting the irradiation conditions such that the obtained position and direction are reflected in the irradiation conditions; and a control section for controlling the radiation to the irradiation target region in response to the irradiation conditions obtained as a result of the correction by the irradiation condition correcting section. The irradiation system can solve a problem of a conventional system in that although the conventional system is effective for the radiation therapy to a head region, its irradiation accuracy is degraded in a trunk region such as abdominal organs where the effect of the body movement such as respiration is greater than in the head region, and hence the position and direction of the irradiation target is continuously changing.

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